



## Nasal Ala Necrosis & Cleft Deformity: A Rare Nasogastric Tube Complication

### KEYWORDS

nasogastric tube, invasive procedure, complications, pressure necrosis, cleft deformity.

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**ABSTRACT** Nasogastric tube has an enduring place in our diagnostic & therapeutic armamentarium and its insertion is one of the most common invasive procedures practised by emergency room physician and surgeons. Although generally safe, associated complications are reported which include misplacement, mucosal trauma/ abrasion, pressure necrosis & nasogastric tube syndrome. Serious complications include respiratory distress, severe laryngeal injury & trachea-oesophageal puncture. However most of this morbidity is avoidable with careful attention. Herein we report a case of 1 month old male baby with bronchopneumonia with necrosed nasal ala and cleft deformity after placement of nasogastric tube for feeding.

### INTRODUCTION

Nasogastric tube (NGT) has an enduring place in our diagnostic & therapeutic armamentarium and its insertion is one of the most common invasive procedures practised by emergency room physician and surgeons. Proper selection of size of NGT and assessment of position of the tube and method of fixing of tube are important to minimize the risks of nasogastric tube related complications. Improper placement and taking of tube results in excessive pulling of nasal ala and subsequent pressure necrosis. This rare condition results in cosmetic defect. The literature contains multifocal etiology including loss of nerve function to affected area. This report will hopefully inspire physician to reconsider this instrument's usefulness for individual patients on a case by case basis.

**CASE:** 1 month old male baby presented to outpatient department MMIMSR with complaint of blackish discoloration and deformity of left nasal ala. Past history revealed that patient had bronchopneumonia 2 weeks back. For that he was admitted and was given parenteral feeding through NGT. After 1 week of NGT feeding blackish discoloration was noted on left nasal ala. NGT was removed and while removing a cleft is formed. (Figure 1)



**Figure 1: Photograph of the patient (1 month male baby) with left nasal ala necrosis and cleft deformity.**

Patient was admitted in our ward; bronchopneumonia and local infection was treated with antibiotics and antifungal; after anesthesia fitness patient was posted for alarplasty for reconstruction surgeon.

**DISCUSSION**

Nasogastric tubes are commonly used in daily practice both for stomach decompression and for feeding purpose. Despite their frequent use, they are associated with complications like lung aspiration, pneumothorax and coiling. (Nakano et al)

Feeding through NGT is one of the commonest methods employed to maintain the nutritional status of patient who is unable to take food orally due to disease or disability (Pancarbo- Hidalgo et al)

Traumatic complications can be due to mucosal trauma / abrasion or from perforating injuries at insertion. Mucosa trauma can be minor, leading onto epistaxis and sore throat or more catastrophic (particularly in long term placements), such as oesophageal-arterial fistulas, and nasogastric tube syndrome.

The complications noted by various authors, especially trachea-pulmonary, range from 0.3% to nearly 8% (McDaniel et al., 1983) and even a mortality of around 0.3% are documented (Rassias et al., 1998).

One of the rare complications associated with insertion of a nasogastric tube is cleft deformity of the nasal tip or ala. (Salati and Rather et al., 2005).

Nasogastric intubation is not a simple procedure as is the general concept and it should not be left to the inexperienced team members of the medical profession because of its attendant complications as highlighted by this case report and documentation of other authors.

The standard technique for insertion should always be adhered to and it should be followed by radiographs to rule out malpositioning and other reported complications (Cappell et al., 1992).

It is recommended therefore that prior to insertion of nasogastric tubes or any other similar tube of significant length, the tube should be checked for structural defect and patency.

Furthermore confirmation of the nasogastric tube's position after insertion should not only be by the traditional method of injecting air through the tube while auscultating the epigastric area to detect air insufflation alone; but other methods of checking like post insertion abdominal x-ray, measurement of tube length, visual assessment of the aspirate and sometimes the pH measurement of aspirate should be used as the foregoing is not one hundred percent reliable.

**CONCLUSION**

Necrosis of nasal ala is usually not associated with morbidity and mortality. Nasal ala cleft provide a diagnostic and reconstructive challenge. Subsequent complications are not fatal. However, the possibility of its occurrence is constantly ignored that may lead to legal and ethical problems.

Defects in vascularity and sensory innervation must be considered as cause of the condition and obstacles in reconstruction. Moreover psychological problems causing factitious wounding may complicate preventive and therapeutic interventions.

It is easily avoided by proper education of staff and doctors by changing place and fixation of NGT. It is essential for Pediatrician and Anesthetists to be aware of this complication when patient needs long term NGT feeding especially in PICU

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